

Appendix J:

Minimum QA/QC Checklist for Post-Sampling Data Evaluation

**QA/QC Analysis Checklist for
SEDIMENT CHEMISTRY ANALYSIS**

GRANT/IAG NUMBER: _____
PROJECT NAME: _____
REVIEWER: _____
DATE: _____

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _____ PCBs _____ pH _____ TOC _____
Dioxins/Furans _____ PAHs _____ Pesticides _____ DO _____ AVS _____
SEM Metals _____ Particle Size _____ Other _____

2. Were the target detection limits met for each parameter?

YES _____
NO _____ (UNACCEPTABLE)

3. Were the Method Blanks less than the established MDL for each parameter?

YES _____
NO _____ (UNACCEPTABLE)

4. Did the results of Field Duplicate Analysis vary by less than the % RPD specified in the QAPP?

YES _____
NO _____ (UNACCEPTABLE)

5. Did the results of the Field Replicates Analysis vary by less than the % RPD specified in the QAPP?

YES _____
NO _____ (UNACCEPTABLE)

6. Did the surrogate spike recoveries and MS/MSD recoveries meet the limits set forth in the QAPP?

YES _____
NO _____ (UNACCEPTABLE)

7. Did the initial calibration verification standards meet the requirements set forth in the QAPP?

YES _____
NO _____ (UNACCEPTABLE)

8. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

YES _____ (UNACCEPTABLE)
NO _____

9. Did all required analysis take place within the required holding time protocols set forth in the QAPP?

YES _____
NO _____ (UNACCEPTABLE)

10. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

YES _____
NO _____ (UNACCEPTABLE)

11. Are measured dry weight contaminant concentrations reported? (Note: Conversion from wet weight to dry weight concentration may occur ONLY if data on moisture or TOC are provided. Nominal concentrations are unacceptable.)

YES _____
NO _____ (UNACCEPTABLE)

12. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

[illegible]

**QA/QC Analysis Checklist for
ACUTE AND CHRONIC WHOLE SEDIMENT TOXICITY TESTS
(10-day *C. tentans* and 10-day or 28-day *H. azteca*)**

GRANT/IAG NUMBER: _____

PROJECT NAME: _____

REVIEWER: _____

DATE: _____

1. Did toxicity tests employ appropriate procedures? [ASTM: E1367, E1611, E1706, USEPA (2000)]

YES _____

NO _____ (UNACCEPTABLE)

2. Does sample storage time exceed the allowable storage time specified in the QAPP?

Allowable Storage Days Specified in QAPP _____

Number of Storage Days Prior to Testing _____

YES _____ (UNACCEPTABLE)

NO _____

3. Was the age for *H. azteca* organisms between 7- to 14-days at the start of the test with an age range less than 2-days?

YES _____

NO _____ (UNACCEPTABLE)

4A. Were all of the *C. tentans* organisms second- to third-stage larvae with at least 50% at the third instar?

YES _____

NO _____ (UNACCEPTABLE)

4B. How was the developmental stage of the *C. tentans* larvae measured?

Head Capsule Width _____ (See Table 10.2 of EPA/600/R-99/064, March 2000)

Length _____ (Should fall between 4 mm to 6 mm)

Weight _____ (Should fall between 0.08 to 0.23 mg/individual)

5. Do flow rates through the different test chambers differ by more than 10% at any particular time during the test?

YES _____ (UNACCEPTABLE)

NO _____

6. Did Dissolved Oxygen remain above 2.5 mg/L?

YES _____

NO _____ (Provide Explanation at end of Checklist)

7. Does daily mean Temperature remain at $23 \pm 1^{\circ}\text{C}$?

YES _____

NO _____ (UNACCEPTABLE)

8. Does the instantaneous Temperature remain at fluctuate less then $23 \pm 3^{\circ}\text{C}$?

YES _____

NO _____ (UNACCEPTABLE)

9. Do the Ranges of for Hardness, Alkalinity, pH, and Ammonia fluctuate more than 50%?

Ranges:

| | | | |
|----|-------|-----------------|-------|
| DO | _____ | Alk | _____ |
| pH | _____ | NH ₃ | _____ |

YES _____ (UNACCEPTABLE)

NO _____

10. Was the Ammonia concentration greater than 20 mg/L?

YES _____

(See EPA/600/R-99/064, March 2000 to determine if ammonia contributed to toxicity of *H. azteca*.)

NO _____

11. Was the Ammonia concentration greater than 82 mg/L?

YES _____

(See EPA/600/R-99/064, March 2000 to determine if ammonia contributed to toxicity of *C. tentans*)

NO _____

12. Was the Mean Control Survival in the *H. azteca* Control Sediments greater than or equal to 80%?

YES _____

NO _____ (UNACCEPTABLE)

13. Was the Mean Control Survival in the *C. tentans* Control Sediments greater than or eqaul to 70%?

YES _____

NO _____ (UNACCEPTABLE)

14. Was the mean weight per surviving *C. tentans* control organism greater than 0.48 mg (ash-free dry weight)?

YES _____

NO _____ (UNACCEPTABLE)

15. Was the overlying water renewed at a rate of 2 volumes per day?

YES _____
NO _____ (UNACCEPTABLE)

16. Please provide details for all of the "UNACCEPTABLE" responses marked above. Include details on the specific results that potentially may be affected by any QA/QC discrepancies, and recommendations regarding usability of data.
